

Message

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**Sent:** 5/23/2019 10:35:12 PM  
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**Subject:** Koocanusa - US portion sampling update - May fieldwork

Afternoon, by way of this email, I'm providing an update for the sampling conducted last week in the USA portion of Lake Koocanusa.

Sampling in the US portion of Lake Koocanusa was completed between May 15 and May 20, 2019. Samples were successfully collected, with the exception of surface invertebrates (see notes below), and tissues have arrived at an analytical laboratory for chemical analysis (Brooks). We're proposing early/mid-June to re-sample for surface invertebrates, pending water temperature increases and comment/coordination with others. Thanks to the Montana Fish, Wildlife and Parks team, pleasure to join you for the annual population sampling and appreciate the support in coordinating sample information collection e.g., fish aging structures and biological information.

#### Fish sampling/processing

- On May 15, from the MTFWP Rexford gill netting program, muscle (and for spring spawners ovary) samples were collected as well as biological data i.e., lengths/weights/gonadosomatic index
- Where caught, 8 individuals from each species captured were sampled (except 15 from northern pikeminnow), with mature females preferentially selected – see table below

#### Invertebrates

- Benthic samples collected – low volume but completed for Rexford and Tenmile areas – 16 samples in total, 8 from each area
- Surface inverts – unable to collect samples in surface tows due to absence of organisms
  - Tows (3 stations) at Tenmile on May 16<sup>th</sup> and tows (3 stations) at Rexford on May 18<sup>th</sup> didn't capture any sample – nearshore or offshore
  - Confirmatory sampling vertical hauls (n=60) at Rexford on May 18<sup>th</sup> identified the absence of zooplankton capture in a 80µm mesh net
  - Absence of zooplankton generally consistent with USACE sampling this week and fish stomachs at Rexford generally had terrestrial insects or other fish present
  - Water temperatures cooler than previous years, potentially delaying development of invertebrate populations

#### Tissue chemistry

- Samples of benthic invertebrates and fish tissues are at Brooks laboratory for selenium/metals analysis – anticipate being able to provide results in July
- Summary of fish tissue samples for chemical analysis, by species, is provided in the table below

Species	Number of Individuals Sampled for Tissue Chemistry	Muscle Tissue (n)	Ovary Tissue (n)	Aging Structures Collected?
Redside Shiner	8	8	8	Yes
Bull Trout	8	8	0	Yes
Northern Pikeminnow	15	15	15	Yes

Yellow Perch	4	4	2	Yes
Largescale Sucker	8	8	8	Yes
Peamouth Chub	8	8	8	Yes
Kokanee	7	7	0	Yes
Westslope Cutthroat	1	1	1	Yes
Mountain Whitefish	2	2	0	Yes

#### Next steps

- Resampling for surface macroinvertebrates (proposed early/mid-June)
- Tissue chemistry results from May sampling communicated to the group in July
- Ongoing support for USACE for particulate sampling in July and September
- Fall sampling for invertebrates and fish tissue in mid-September 2019 concurrent with MT FWP fish sampling

Any questions please let myself or Carla know.

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